

IN THE CLAIMS:

Please cancel claims 92 to 94 without prejudice. Please amend the claims as indicated below:

Claims 1-71 (canceled)

72. (Currently Amended) A purified ~~polypeptide~~ antibody or functional fragment thereof that binds to ~~a neoplastic cells~~ cell, wherein said neoplastic cell is an adenocarcinoma of the lung, a squamous cell lung carcinoma, an intestinal-type gastric carcinoma, a diffuse-type gastric carcinoma, an adenocarcinoma of the colon, an adenocarcinoma of the prostate, a squamous cell carcinoma of the esophagus, an adenocarcinoma of the esophagus, an adenocarcinoma of the esophagus, a lobular carcinoma of the breast, a ductal carcinoma of the breast, an adenocarcinoma of the pancreas, an adenocarcinoma of the ovary or an adenocarcinoma of the uterus, and wherein said polypeptide comprising antibody or functional fragment thereof comprises a light chain variable region an amino acid sequence substantially at least 75% identical to the amino acid sequence of SEQ ID NO:1 and a heavy chain variable region sequence at least 75% identical to the amino acid sequence of SEQ ID NO:3 a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and a combination thereof.

73. (Currently Amended) ~~[[The]]~~ A purified ~~polypeptide~~ antibody or functional fragment according to Claim 72, wherein said ~~polypeptide~~ antibody or functional fragment specifically binds to BXPC-3 (ATCC Accession No. CRL-1687), 23132/87 (DSMZ Accession No. ACC 201), COLO-206F (DSMZ Accession No. ACC 21), COLO-699 (DSMZ Accession No. ACC 196), ~~[[and]]~~ or LOU-NH91 (DSMZ Accession No. ACC 393) cells, and wherein said antibody or functional fragment thereof comprises a light chain variable region sequence at least 75% identical to the amino acid sequence of SEQ ID NO:1 and a heavy chain variable region sequence at least 75% identical to the amino acid sequence of SEQ ID NO:3 and not to a non-neoplastic cell.

74. (Currently Amended) The purified ~~polypeptide~~ antibody or functional fragment according to Claim 72, wherein said ~~polypeptide~~ antibody or functional fragment specifically binds to BXPC-3 (ATCC Accession No. CRL-1687), 23132/87 (DSMZ Accession No. ACC 201), COLO-206F (DSMZ Accession No. ACC 21), COLO-699 (DSMZ Accession No. ACC 196) ~~[[and]]~~ or LOU-NH91 (DSMZ Accession No. ACC 393) cells ~~and not to non-neoplastic cells, and wherein said neoplastic cell is an adenocarcinoma of the lung, a squamous cell lung~~

~~carcinoma, an intestinal-type gastric carcinoma, a diffuse-type gastric carcinoma, an adenocarcinoma of the colon, an adenocarcinoma of the prostate, a squamous cell carcinoma of the esophagus, an adenocarcinoma of the esophagus, an adenocarcinoma of the esophagus, a lobular carcinoma of the breast, a ductal carcinoma of the breast, an adenocarcinoma of the pancreas, an adenocarcinoma of the ovary and an adenocarcinoma of the uterus.~~

75. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim [[72]] 73, wherein said polypeptide antibody or functional fragment specifically binds to an adenocarcinoma of the lung, a squamous cell lung carcinoma, an intestinal-type gastric carcinoma, a diffuso-type gastric carcinoma, an adenocarcinoma of the colon, an adenocarcinoma of the prostate, a ~~squamous~~ squamous cell carcinoma of the esophagus, an adenocarcinoma of the esophagus, an adenocarcinoma of the esophagus, a lobular carcinoma of the breast, a ductal carcinoma of the breast, an adenocarcinoma of the pancreas, an adenocarcinoma of the ovary [[and]] or an adenocarcinoma of the uterus, ~~and not to a non-neoplastic cell.~~

76. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim 72, ~~wherein said polypeptide comprising a functional fragment comprises an antibody or a functional fragment of said antibody.~~

77. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim 76, wherein said ~~polypeptide is said functional fragment of said antibody~~ is selected from the group consisting of V_L, V_H, F_v, F_c, Fab, Fab' and F(ab')₂.

78. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim [[77]] 72, wherein said polypeptide antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) substantially at least 80% identical to SEQ ID NO:1, [[or]] and an amino acid sequence of a variable region of a heavy chain (V_H) substantially at least 80% identical to SEQ ID NO:3, or both said amino acid sequences.

79. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim [[77]] 72, wherein said polypeptide antibody or functional fragment includes ~~a nucleic acid~~ an amino acid sequence of a variable region of a light chain (V_L) substantially at least 85% identical to SEQ ID NO:2 SEQ ID NO:1, [[or]] and ~~a nucleic acid~~ an amino acid sequence of a variable region of a heavy chain (V_H) substantially at least 85% identical to SEQ ID NO:4 SEQ ID NO:3, or both said nucleic acid sequences.

80. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim [[77]] 72, ~~wherein said functional fragment comprises a fragment of the sequence of~~ comprising SEQ ID NO:1 and SEQ ID NO:3.
81. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim [[77]] 72, wherein said functional fragment comprises ~~a fragment that is substantially identical to the sequence of~~ SEQ ID NO:1 ~~[[or]]~~ and SEQ ID NO:3.
82. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim 72, wherein said polypeptide antibody or functional fragment comprises a sequence that is substantially at least 90% identical to the amino acid sequence of SEQ ID NO:1.
83. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim 72, wherein said polypeptide antibody or functional fragment comprises a sequence that is substantially at least 90% identical to the amino acid sequence of SEQ ID NO:3.
84. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim 72, wherein said polypeptide comprises nucleic acid light chain variable region sequence has CDR sequences that are substantially identical to nucleotides 67-99 (CDR1), 145-165 (CDR2) and 262-288 (CDR3) CDR1, CDR2 and CDR3 of SEQ ID NO:2 SEQ ID NO:1.
85. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim 72, wherein said polypeptide comprises nucleic acid heavy chain variable region sequence has CDR sequences that are substantially identical to nucleotides 91-105 (CDR1), 148-198 (CDR2) and 295-330 (CDR3) CDR1, CDR2 and CDR3 of SEQ ID NO:4 SEQ ID NO:3.
86. (Currently Amended) The purified polypeptide antibody or functional fragment according to Claim 72, wherein said olypeptide antibody or functional fragment includes at least one complementary-determining region[[s]] (CDR) ~~or functional fragments thereof comprising an amino acid sequence~~ substantially identical to an amino acid sequence selected from the group consisting of light chain variable region CDRs [Ser-Gly-Asp-Lys-Leu-Gly-Asp-Lys-Tyr-Ala-Cys (CDR1) or Gln-Asp-Ser-Lys-Arg-Pro-Ser (CDR2) or Gln-Ala-Trp-Asp-Ser-Ser-Ile-Val-Val (CDR3) of SEQ ID NO:1], and heavy chain variable region CDRs

[Ser-Tyr-Ala-Met-His (CDR1) or Val-Ile-Ser-Tyr-Asp-Gly-Ser-Asn-Lys-Tyr-Tyr-Ala-Asp-Ser-Val-Lys-Gly (CDR2) or Asp-Arg-Leu-Ala-Val-Ala-Gly-Lys-Thr-Phe-Asp-Tyr (CDR3) SEQ ID NO:3] ~~and a combination thereof.~~

87. (Currently Amended) The purified ~~polypeptide~~ antibody or functional fragment according to Claim 72, wherein said ~~polypeptide~~ antibody or functional fragment is a monoclonal antibody.

88. (Currently Amended) [[A]] The purified polypeptide antibody or functional fragment according to Claim 72, comprising an amino acid sequence selected from the group consisting of at least 95% identical to the amino acid sequence of SEQ ID NO:1, and an amino acid sequence at least 90% identical to the amino acid sequence of SEQ ID NO:3 and a combination thereof.

89. (Withdrawn) A cell expressing a polypeptide selected from the group consisting of: said polypeptide comprising an amino acid sequence substantially identical to a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and a combination thereof, and wherein said polypeptide specifically binds to BXPC-3 (ATCC Accession No. CRL-1687), 23132/87 (DSMZ Accession No. ACC 201), COLO-206F (DSMZ Accession No. ACC 21), COLO-699 (DSMZ Accession No. ACC 196), and LOU-NH91(DSMZ Accession No. ACC 393) cells and not to a non-neoplastic cell;

said polypeptide comprising at least one complementary-determining regions (CDR) or functional fragments thereof comprising an amino acid sequence substantially identical to an amino acid sequence selected from the group consisting of [Ser-Gly-Asp-Lys-Leu-Gly-Asp-Lys-Tyr-Ala-Cys (CDR1) or Gln-Asp-Ser-Lys-Arg-Pro-Ser (CDR2) or Gln-Ala-Trp-Asp-Ser-Ser-Ile-Vat-Val(CDR3) of SEQ ID NO:1], [Ser-Tyr-Ala-Met-His (CDR1) or Val-Ile-Ser-Tyr-Asp-Gly-Ser-Asn-Lys-Tyr-Tyr-Ala-Asp-Ser-Val-Lys-Gly (CDR2) or Asp-Arg-Leu-Ala-Val-Ala-Gly-Lys-Thr-Phe-Asp-Tyr (CDR3) SEQ ID NO:3] and a combination thereof; and,

said polypeptide comprising an amino acid sequence substantially identical to a sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and a combination thereof, wherein said polypeptide specifically binds to an adenocarcinoma of the lung, a squamous cell lung carcinoma, an intestinal-type gastric carcinoma, a diffuse-type gastric carcinoma, an adenocarcinoma of the colon, an adenocarcinoma of the prostate, a squamous

cell carcinoma of the esophagus, an adenocarcinoma of the esophagus, an adenocarcinoma of the esophagus, a lobular carcinoma of the breast, a ductal carcinoma of the breast, an adenocarcinoma of the pancreas, an adenocarcinoma of the ovary and an adenocarcinoma of the uterus, and not to a non neoplastic cell.

90. (Withdrawn) A cell expressing a polypeptide comprising a sequence substantially identical to an amino acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3 and a combination thereof.

91. (Withdrawn) The cell expressing a polypeptide according to Claim 90, wherein said cell is a hybridoma.

92.-94. (Cancel)

95. (Currently Amended) An isolated nucleic acid molecule ~~comprising the sequence of SEQ ID NO:2 or SEQ ID NO:4~~ encoding a heavy or light chain variable region sequence of the antibody of claim 72.

96. (Previously Presented) The isolated nucleic acid molecule according to Claim 95, wherein said nucleic acid molecule is comprised within a vector.

97. (Previously Presented) The isolated nucleic acid molecule according to Claim 96, wherein said vector is comprised within a cell.

98. (New) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 90% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 95% identical to SEQ ID NO:3.

99. (New) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 95% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 95% identical to SEQ ID NO:3.

100. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 80% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 80% identical to SEQ ID NO:3.

101. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 85% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 85% identical to SEQ ID NO:3.
102. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment comprises a sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO:1.
103. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment comprises a sequence that is at least 90% identical to the amino acid sequence of SEQ ID NO:3.
104. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 95% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 90% identical to SEQ ID NO:3.
105. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 90% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 95% identical to SEQ ID NO:3.
106. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes an amino acid sequence of a variable region of a light chain (V_L) at least 95% identical to SEQ ID NO:1, and an amino acid sequence of a variable region of a heavy chain (V_H) at least 95% identical to SEQ ID NO:3.
107. (New) The purified antibody or functional fragment according to Claim 73, comprising a functional fragment.
108. (New) The purified antibody or functional fragment according to Claim 107, wherein said functional fragment is selected from the group consisting of V_L , V_H , F_v , F_c , Fab, Fab' and $F(ab')_2$.
109. (New) The purified antibody or functional fragment according to Claim 73, wherein said light chain variable region sequence has CDR sequences identical to CDR1, CDR2 and CDR3 of SEQ ID NO:1.

110. (New) The purified antibody or functional fragment according to Claim 73, wherein said heavy chain variable region sequence has CDR sequences identical to CDR1, CDR2 and CDR3 of SEQ ID NO:3.

111. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment includes at least one complementary-determining region (CDR) identical to an amino acid sequence selected from the group consisting of light chain variable region CDRs [Ser-Gly-Asp-Lys-Leu-Gly-Asp-Lys-Tyr-Ala-Cys (CDR1) or Gln-Asp-Ser-Lys-Arg-Pro-Ser (CDR2) or Gln-Ala-Trp-Asp-Ser-Ser-Ile-Val-Val (CDR3) of SEQ ID NO:1], and heavy chain variable region CDRs [Ser-Tyr-Ala-Met-His (CDR1) or Val-Ile-Ser-Tyr-Asp-Gly-Ser-Asn-Lys-Tyr-Tyr-Ala-Asp-Ser-Val-Lys-Gly (CDR2) or Asp-Arg-Leu-Ala-Val-Ala-Gly-Lys-Thr-Phe-Asp-Tyr (CDR3) SEQ ID NO:3].

112. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment is a monoclonal antibody.

113. (New) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment inhibits cell proliferation of 23132/87 (DSMZ Accession No. ACC 201) cells.

114. (New) The purified antibody or functional fragment according to Claim 72, wherein said antibody or functional fragment induces apoptosis of at least one of BXPC-3 (ATCC Accession No. CRL-1687) and 23132/87 (DSMZ Accession No. ACC 201) cells.

115. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment inhibits cell proliferation of 23132/87 (DSMZ Accession No. ACC 201) cells.

116. (New) The purified antibody or functional fragment according to Claim 73, wherein said antibody or functional fragment induces apoptosis of at least one of BXPC-3 (ATCC Accession No. CRL-1687) and 23132/87 (DSMZ Accession No. ACC 201) cells.